

**Report to the Twenty-Second Legislature  
2004 Regular Session**

*Pursuant to*  
House Concurrent Resolution No. 172 HD 1

**Department of Commerce and Consumer Affairs'  
Interim Report of the Ad Hoc Advisory Group**

*On*  
The Development and Implementation of Standard Offer Contracts And  
Standardized Interconnection Agreements to Reduce the Approval  
Process Time for the Implementation of Renewable Energy Systems and  
to Facilitate the Purchase of Electricity from Renewable Energy  
Producers in Hawaii

**Department of Commerce and Consumer Affairs  
State of Hawaii**

**December 2003**

## **PURPOSE OF HOUSE CONCURRENT RESOLUTION NO. 172:**

House Concurrent Resolution No. 172, HD 1 ("Resolution"), adopted by the House of Representatives and the Senate of the Twenty-Second Legislature of the State of Hawaii, Regular Session of 2003, requested the Consumer Advocate to form an ad hoc advisory group to investigate and make recommendations regarding the development and implementation of standard offer contracts and interconnection agreements to: (1) reduce the approval time to implement renewable energy systems; and (2) to facilitate the purchase of electricity from renewable energy producers in Hawaii. The need for the formation of the advisory group stems from the Legislature's observation that the State of Hawaii:

- depends on imported fossil fuel for ninety percent of its electricity needs, seventy-seven percent of which is petroleum, which threatens the health of the economy and environment due to price volatility, oil spill, air quality, and global climate change risks; and
- is generously endowed with indigenous sources of renewable fuel, including solar radiation, wind, geothermal, ocean temperature differential, ocean wave, and river currents.

The situation appears contrary to section 226-18, Hawaii Revised Statutes, which sets forth the state energy policy of striving to increase the ratio of indigenous to imported energy use and increase energy self-sufficiency.

## **TIME PERIOD TO COMPLY WITH RESOLUTION DIRECTIVES:**

The Resolution allowed the ad hoc advisory group two years to complete its work. An interim report of the ad hoc advisory group's efforts was to be submitted at least twenty days prior to the convening of the Regular Session of 2004. A final report, including the findings and recommendations, and any necessary proposed legislation, to the Legislature is due at least twenty days prior to the convening of the Regular Session of 2005. This document is the interim report of the work performed to-date.

In response to the Resolution, the Consumer Advocate formed an ad hoc advisory group that has been discussing the challenges of developing standard offer contracts and interconnection agreements. This document is the interim report that outlines the process and progress to-date.

## **ACTIONS TAKEN TO-DATE TO COMPLY WITH RESOLUTION DIRECTIVE:**

Invitations were sent to the representatives of the organizations identified in the Resolution. Three meetings of the ad hoc advisory group members were held on the following dates:

- September 3, 2003—attendance included representative(s) of: the Public Utilities Commission, Kauai Island Utility Cooperative, Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., Maui Electric Company, Ltd., The Gas Company, Department of Business Economic Development & Tourism, County of Kauai, County of Hawaii, Hawaii Renewable Energy Alliance, Life of the Land, PowerLight Corporation, counsel for Hess Microgen and counsel for Covanta Energy, Representative Hermina Morita.
- October 7, 2003--attendance included the above representative(s) with the following exceptions: The representatives for Kauai Island Utility Cooperative and PowerLight Corporation were unable to attend the second meeting. The representative for the County of Maui attended the meeting.
- December 5, 2003--attendance included the same representative(s) with the following exceptions: Counsel for Covanta Energy and the representatives for the Counties of Kauai, Maui and Hawaii were unable to attend this meeting. The representative from Kauai Island Utility Cooperative attended this meeting.

#### **SUMMARY OF MEETING DISCUSSIONS:**

##### **September 3, 2003 meeting:**

At the September 3<sup>rd</sup> meeting, counsel for Hawaiian Electric Company, Inc. and subsidiaries (hereinafter referred to as "HECO" or "Company") made a presentation, which informed the ad hoc committee that HECO currently has the following standard form contracts/agreements:

- Interconnection agreements for non-exporting distributed generating facilities.
- Small photovoltaic systems that are merely submitted to the Public Utilities Commission for informational purposes and are not approved by the Commission.
- Purchases of energy from 100 kilowatt or less sized systems.
- Net energy metering agreement.

In looking at the resolution, HECO expressed the Company's uncertainty as to how many standard form contracts would be required to be responsive to the Resolution directive to promote renewable energy development in the State. HECO further represented that the above current standard form contracts serve as a starting point for negotiating the specific terms and conditions under which the energy provided by the developer's facility would be sold to the utility. In addition, HECO believed that the time

required to negotiate the contract is associated with the substantive issues identified by the participants. HECO stated that it is not the boilerplate terms and conditions that take time.

Several of the specific factors that HECO believes need to be considered in developing a power purchase agreement are:

- Whether the contract is for a firm capacity or as-available resource.
- The type of technology used to produce the energy, which will cause differences in the terms and conditions of the contract.
- The size of the developer's facility (relative to the size of the utility's system).
- The system impact.
- Where the developer's system will be located.
- Developer's financing requirements.
- Whether the power produced is ancillary to the commercial activities of the developer (e.g., sugar plantation operations).

Other factors that, in HECO's opinion, may contribute to the time required to negotiate the contracts are:

- The developer may want to finalize the contract before the interconnection requirements study is completed—it is important that the interconnection requirements study be completed in order to determine the facilities that are needed to interconnect the developer's facility to the utility's system and identify the costs to be incurred in constructing these facilities.
- The utility may take time to identify the interconnection facilities required after assessing the results of the various studies.
- The developer may want non-standard terms and conditions and the utility may seek non-standard benefits to balance the equation.
- Firm capacity contracts are more difficult to negotiate because the participants may often disagree on the utilities' avoided cost and the acceptable resource plan.

With regard to as-available energy contracts, HECO presented the Company's view that the issues contributing to the length of time it takes to negotiate a power purchase contract include the following:

- Pricing—While the utility asserts that agreement to use the quarterly filed avoided energy costs avoids the need for negotiation on this term, developers may want to negotiate another price based on a fixed cost, or a cost based on formula rates. This point may affect the developer's ability to obtain financing for the project. In addition, although the utility's position is that the Public Utilities Commission has already addressed this issue by stating, in a 2001 Decision and Order, that capacity payments for a proposed as-available energy project were not warranted, some developers continue to assert that capacity payments are appropriate for as-available energy.
- Term of contract—these provisions may affect what gets negotiated and the price at which the power will be sold.
- In-service date/deadlines—these provisions deal with the deadline to install the facility/ avoid tying up curtailment priority, etc.
- Performance standards/allowed capacity.
- Enforcement/assurances.
- Interconnection requirements.
- Other terms and conditions.

Issues that HECO believes are applicable for firm capacity contracts are as follows:

- Timing of installation of the facility.
- The amount of the capacity that is firm.
- Dispatch of the energy and capacity.
- Pricing.
- Design and performance standards.
- Term and termination of the contract.
- Interconnection requirements.
- Other terms and conditions.

To expedite the negotiation process, it was represented that the utility could:

- Provide more information up front.
- Address the time required to perform the interconnection requirements study.
- Address the avoided cost issues.
- Be more proactive in meeting with manufacturers and learning about technologies.
- Allow observation of the process by the Commission and/or Consumer Advocate staff.

Actions that the Consumer Advocate and Public Utilities Commission could take to assist in expediting the process are to:

- Act expeditiously on applications seeking Commission approval of a purchase power agreement.
- Mediate disputes on an informal basis.
- Monitor contentious negotiations.

Developer actions to shorten the process could include:

- Providing complete information.
- Addressing system requirements.
- Requiring equipment suppliers to meet standards.
- Recognizing that non-standard pricing/terms must balance ratepayer interests.
- Not expecting to cut corners.

After HECO's presentation, the participants expressed their opinions and discussed the varying opinions.

The presentation and discussion provided useful information on some of the challenges that have been faced in negotiating the terms and conditions of various types of purchase power agreements. The participants agreed on the need to focus the discussion, given the varying challenges that arise with the terms and conditions of purchase power agreements for different types and sizes of energy resources.

Thus, for the next meeting, the participants agreed to look at the as-available contracts and other available documentation. It was agreed that this documentation should include the criteria that the utility considers in determining the need for specific terms/conditions of the purchase power contract currently provided by each utility to a potential independent power producer seeking to sell “as-available” power to the utility.

To facilitate discussion in the next meeting, participants were asked to provide copies of available standard purchase power contract for “as-available” energy for distribution to the other ad hoc committee members. Lastly, if there were other representatives or parties who should be included in the ad hoc committee, the Consumer Advocate asked to be informed so that invitations could be made for the next meeting.

### **Second Meeting—October 7, 2003**

For the second meeting, Warren Bollmeier who represents the Hawaii Renewable Energy Alliance was asked to present the developer’s perspective on the feasibility of developing standard form purchase power and interconnection agreements, including the challenges that must be overcome to expedite the negotiation process. Mr. Bollmeier stated that standard offer contracts are the solution to promoting renewable energy and that there are two types of contracts: wind farm or intermittent (as-available) energy and firm power. He indicated that California previously offered standard offer contracts, was in the process of attempting to develop new standard offer contracts, and identified several points to be considered in developing a standard offer contract as follows:

- The general terms and conditions.
- The types of payments where energy is based on marginal costs, and capacity is based on the availability factor which represents the capacity delivered as opposed to capacity which is avoided. In Hawaii, capacity payments are based on the capacity that is avoided by the purchase of power from the developer. Mr. Bollmeier suggested that the capacity payment for as-available energy could be reflected as an adder to the energy costs. In addition, Mr. Bollmeier believed that performance standards should be based on actual operational experience. Mr. Bollmeier claimed that, in his opinion, the performance standards proposed by HECO are pre-emptive and the “one-size-fits-all” approach is without justification. Mr. Bollmeier expressed the opinion that performance standards may be justified, but developers believe they should be developed in a voluntary consensus. Finally, Mr. Bollmeier stated that capacity payments should be based on the actual capacity that is delivered.
- The fault-ride through. Mr. Bollmeier expressed the opinion that the developer must be able to protect his equipment (e.g., wind turbines) from

potential damage during emergency conditions (such as utility faults). He claimed that until recently the utility did not want wind farms to continue operating during fault conditions, as there was a potential for “islanding” and potential risks to utility personnel working in the field to repair the faults. He understands that currently, the wind farm is expected to “ride-through” fault conditions, in part, to help protect the utility’s system, including the prevention of cascading events that lead to a loss of power on a large portion of the grid and/or the whole grid on an island. He claimed that the requirement, as he understands it, cannot be met by the wind turbines and requires the addition of very expensive power conditioning equipment. The “fault ride-through” requirement needs further discussion, and HREA proposed a voluntary consensus similar to that proposed above for performance standards to resolve the issue.

- Which party, the utility or developer, should get any available energy credits. Mr. Bollmeier claimed that the developer, as opposed to the utility, should be allowed to retain the rights to any potential environmental credits.

Mr. Bollmeier presented what he represented to be samples of a California standard offer contract and briefly explained the contract. Mr. Bollmeier stated his opinion that standard form contracts are possible in Hawaii.

After Mr. Bollmeier’s presentation, the participants engaged in lively discussion on the ability to develop a form contract that standardized all contract provisions, terms and conditions. HECO indicated that the contract presented by Mr. Bollmeier is no longer being offered in California, which is a reflection of the problems inherent with such standard offer contracts.

The parties discussed the possibility of developing standardized provisions. Although a few committee participants continued to believe that standard form contracts are possible, many of the participants acknowledged that the terms and conditions for implementing many provisions may be the source of potential disagreement between the negotiating parties, and thus could not be standardized. The negotiation of these terms and conditions is probably the general cause for the length of time it takes to finalize and execute a contract.

An issue was raised that a potential cause of the length of time that it takes to successfully negotiate a contract stems from the process in which the negotiation occurs, as opposed to the contract provisions, terms and/or conditions. Thus, a suggestion was made to include an analysis of the negotiation process in future discussions.

At the end of the meeting, the participants agreed that the initial efforts would focus on the “as-available” contract that HECO currently offers potential developers. This contract was selected because the utility and its subsidiaries provide electric



service in three of the four Counties in the State. The ad hoc committee members agreed to look at each provision of the contract, identify the specific provision for which the terms and conditions could not be standardized, and explain why. All comments were consolidated in a matrix and distributed to the ad hoc committee members for discussion in the third meeting scheduled for December 5, 2003. The issues related to interconnection agreements would be deferred for later discussion.

### **Third Meeting--December 5, 2003:**

At the start of the third meeting, the Consumer Advocate suggested deferring discussion on provisions that dealt with:

- general policy considerations; and
- specific issues that may be resolved in other pending dockets<sup>1</sup> opened at the Public Utilities Commission.

The Consumer Advocate's suggestion was based on the Consumer Advocate's belief that reaching agreement on the standardization of the terms and conditions for these important provisions would be difficult, if not impossible, to achieve in the ad hoc advisory group process. The general policy matters that the Consumer Advocate believes must be addressed are:

- Whether removal of the Public Utility Regulatory Policies Act ("PURPA") language and associated requirements contained in the various provisions of the standard contract is appropriate for the ad hoc committee's effort to promote the development of renewable energy. While the PURPA contract requirements serve as a good starting point because the requirements include renewable resources, the ad hoc committee may not want the purchase power contract to be tied to the PURPA process because of the future uncertainty of the PURPA requirements.<sup>2</sup> Furthermore, co-generating facilities covered under the PURPA requirements do not necessarily support the goal of promoting the development of renewable energy resources and reduce the dependence on imported fossil fuel.

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<sup>1</sup> On September 11, 2003, the Public Utilities Commission ordered HECO to begin the process to develop the Company's Third Integrated Resource Plan. On October 21, 2003, the Public Utilities Commission opened a Docket No. 03-0372 to evaluate competitive bidding as a mechanism for acquiring or building new generating capacity.

<sup>2</sup> The Energy Bill before the United States Congress would have implemented changes to the mandatory purchase obligations of PURPA. While that legislation was not passed, the Consumer Advocate noted that continued efforts to tie the work of the ad hoc committee to the PURPA requirements may not be effective in achieving the goal of developing a standard form purchase power contract to promote the development of renewable energy.

- Whether the ad hoc committee participants may need to focus on long-term contracts that exceed the terms of as-available contract in order to encourage new renewable generation. The Consumer Advocate's belief is based on the observation that, while many of the contract terms will be the same, the deliberation over the terms in the "as-available contract" should include a focus on what will be needed for the standardized long-term contracts.

Based on the matrix of comments, it appears that there is continued agreement regarding most of the specific terms and conditions that could not, or should not, be standardized in the "as-available" contract. Furthermore, several specific terms and conditions may be subject to extensive negotiation between the developer and utility.

The Consumer Advocate stated that there are, however, possible proceedings currently pending before the Commission that may serve as an avenue to remove the differences between the developer and utility. The following is a list of the specific issues that the Consumer Advocate believes may be more appropriately resolved in pending dockets before the Commission.

1. The development of long-term contracts with stable rate structures or payment terms is a critical component of attracting investors to finance projects. Docket No. 03-0372 addresses the feasibility of using a competitive bidding mechanism for new generating capacity. This proceeding may be an appropriate forum for discussing and resolving this issue. This question could also be addressed in the Integrated Resource Plan being developed by the utility and to be submitted in Docket No. 03 0253. It might also be possible to address these issues in a specific petition addressing avoided cost filings.
2. Hawaii Renewable Energy Alliance has raised concerns regarding how the energy payments are calculated under HECO's standard offer contract and whether capacity payments should be made for renewable power projects. The Consumer Advocate contended that if the State is going to use competitive bidding for procuring these resources, then the issue of administratively determining avoided costs may disappear. For competitive bidding to work, however, the Consumer Advocate claimed that there needs to be a clear understanding of the rules, which include many of the contract terms under consideration by this ad hoc committee.
3. The Consumer Advocate noted that the operation of Hawaii's individual electrical island systems presents a number of challenges. System light loading conditions that can impact the ability of developers of renewable power resources to sell energy to the utility is one of those challenges. The issues that develop are very important and must be resolved in order to achieve the objective of promoting renewable energy. The issues,

however, are not easily resolved, and may need to be addressed either in a sub-group or by the Commission in generic proceeding.

The ad hoc committee members then proceeded to discuss the Consumer Advocate's proposal to defer certain issues at some length. The parties agreed to give the matter further thought and used the meeting as an opportunity to get clarification of the matrix comments provided by various ad hoc committee members.

At the conclusion of the meeting, the participants then agreed to:

- Think about the process to address the issues that have been tabled for discussion and submit their proposed process for addressing such issues by January 9, 2004.
- Provide the clarification sought on the matrix comments by December 19, 2004.
- Review the matrix and identify revisions that may be necessary as a result of the meeting discussion.
- Review the terms and conditions that could not be standardized and identify the appropriate avenue in which the matter could be addressed and possibly resolved.

The revised matrixes will be submitted to the Consumer Advocate by January 9, 2004. The comments will be consolidated and distributed to the ad-hoc committee members in preparation for the next meeting. No date for the next meeting was set.

The Consumer Advocate anticipates the agenda for the next meeting to include the proposed process for addressing the tabled issues, and the suggested avenues for addressing and possibly resolving the terms and conditions that could not be standardized. This discussion will be helpful in determining the specific actions that will need to be taken to comply with the directives of the Resolution.